



Government of India
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Post Graduate Institute of Medical Education & Research

Tests performed at Department of Microbiology

1 BACTERIOLOGY

1.1 Microscopy & Culture

1.1.1 Aerobic Culture & Sensitivity

Pus (Swab & Aspirated Samples)
Sputum/BAL
Throat Swab
Body Fluids & Aspirates (Pleural, Pericardial, Peritoneal, ET, Joint Fluids etc)
CSF
Blood (conventional & automated system)
Urine
Stool
Tissue /Biopsies

1.1.2 Anaerobic Culture

Pus (Deep seated abscesses/ Brain abscess etc)
Body Fluids & Aspirates
Stool
Tissue Biopsies

1.1.3 Mycobacterium Culture, Sensitivity & PCR

ZN Stain for Mycobacterium
Modified ZN Stain for *M. Leprae*
Automated Liquid Culture & Sensitivity [Mycobacteria Growth Indicator Tube (MGIT)]
Real Time PCR
Cartridge Based Nucleic Acid Amplification Test (CBNAAT)

1.2 Serology

1.2.1 Rapid Tests

Bacterial Antigen Detection in CSF (*N.meningitidis*, *S. pneumoniae*, *H. influenzae*, *E.coli*)
Salmonella antibody
Scrub Typhus antibody

1.2.2 Others

Widal Test
VDRL & TPHA
ASO Antibody
Brucella Antibody

2 MYCOLOGY

2.1 Microscopy (KOH, Gram Stain, India Ink) & Culture

Skin Scrapings/Hair/Nail

Urine
Sputum/BAL
Body Fluids
Corneal scrapings/Aqueous humor/Vitreous aspirate
Pus from Various sites (Ear/Eye/Nasal/Brain abscess/Liver abscess etc)
Tissue/Biopsy

2.2 Antifungal Susceptibility testing

Yeast

2.3 Serology

Cryptococcus antigen detection in CSF
Galactomannan Antigen detection for invasive Aspergillosis

3 VIROLOGY

3.1 Serology: Rapid/ELISA

HIV Antibody
Dengue NS 1 Antigen
Dengue Ig M Antibody
Chikungunya Ig M Antibody
Hepatitis A Virus Antibody
Hepatitis B Virus Profile

- Hepatitis B Virus Surface antigen
- Hepatitis B Virus e Antigen
- Hepatitis B Virus e Antibody
- Hepatitis B Virus Core IgM antibody
- Hepatitis B Virus Core Total Antibody

Hepatitis C Virus Antigen/Antibody
Hepatitis E Virus Antibody
Rubella Ig M Antibody
Cytomegalovirus Ig M Antibody
Herpes Simplex I & II Ig M Antibody
Measles Ig M Antibody
Mumps Ig M Antibody
Japanese Encephalitis (JE) Ig M Antibody

3.2 Stool

Rota Virus Antigen

3.3 Viral Load: PCR Quantitative

HIV
Hepatitis B Virus
Hepatitis C Virus
Cytomegalovirus
H1N1 (Nasopharangeal swab/ Respiratory secretions)

4 PARASITOLOGY

4.1 Microscopy

Wet mounts

Stool for Ova/ Cyst/Trophozoites etc
Corneal Scrapings for Acanthamoeba

4.2 Staining

Modified ZN Staining for Cryptosporidium/Microsporidium/Cyclospora

4.3 Serology

Malaria Antigen

Filaria Antigen

Toxoplasma IgM Antibody

Leishmania serology

5 IMMUNOLOGY

CD 4 Counts & Percentages

RA Factor

Anti CCP

ANA

ANA Profile (dsDNA,Nucleosome,histone,SmD1,PCNA,PO(RPP),SS-A/Ro60,SS-A/Ro52,SS-B/La,CENP-B,Scl70,U1-snRNP,AMA-M2,Jo-1,PM-Scl,Mi2,Ku)

ds DNA

Anti Phospholipid Antibody (APLA)

- β 2 Microglobulin Ig M Antibody
- β 2 Microglobulin Ig G Antibody
- Anti Cardiolipin IgM Antibody
- Anti Cardiolipin IgG Antibody

Biomarkers for sepsis

- CRP
- Procalcitonin

Complement (C3, C4)

Immunoglobulins (IgA, IgM, IgG, IgE)

6 INFECTION CONTROL SURVEILLANCE

Air Bacteriology (Critical Areas – OT, ICU etc)

Samples like blood bags & packed sterile objects for sterility testing

Water Culture

Disinfectant Testing

Biological Indicator for Autoclave sterility testing

Suspected Outbreaks

- Environmental Sampling
- HAI Surveillance (Hand/Nasal swabs etc)